

REMARKS

Claims 1-19 are now pending in the application. Claims 1, 3-5, 6-13, and 14-19 have been rejected over the Smith patent. Although the Office Action Summary indicated that claims 1-9 have been rejected, claim 2 was not rejected or mentioned in the Detailed Action.

Rejection Under 35 U.S.C. § 103(a) over Smith

Claims 1, 3-5, and 14-19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith (U.S. Pat. No. 6,712,449). This rejection is respectfully traversed.

A rejection for obviousness must establish motivation for one of ordinary skill in the art to modify the reference, must show that the prior art provided a reasonable expectation that the modification would be successful, and must teach or suggest all of the claim limitations. *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991). Even when all of the claim limitations are found in the prior art, the prior art must also provide motivation of making the specific combination now claimed. *In re Kotzab*, 55 USPQ2d 1313 (Fed. Cir. 2000).

The Office Action has not met the criteria for a prima facie case of obviousness. First, each of the claims is directed to a four-color ink set. The Smith patent does not disclose or suggest a four-color ink set. Instead, the Smith patent describes a six-color ink set that combines high-chroma and low-chroma inks. Column 3, lines 9-15; lines 45-53 (cyan, magenta, yellow, dilute cyan, dilute magenta, and black in six chambers); lines 60-61 (six ink reservoirs).

Secondly, the Smith patent does not disclose *any* of the colorimetric aim values of *any* of the ink colors of the claimed four-color ink set.

There is, moreover, no motivation to use completely different colors from the Smith color set, nor to use only four as opposed to six. As covered in the Background of the present

application, those in the field have turned to spot colors or six- or even seven-member ink sets to achieve a greater color gamut in printing.

The authority cited in the Office Action, *In re Aller*, provides that when the prior art teaches how to carry out a process using particular conditions, it is not inventive to make the kinds of changes that one of ordinary skill in the art would make to determine optimum conditions. In the *Aller* case, the reference taught the same process used by the applicant, but provided only one experiment to illustrate the process. The experiment carried out the process at 100°C using 10% aqueous sulfuric acid solution. The claim at issue was for the process carried out at 40-80°C with 25-70% aqueous sulfuric acid. The modification was found to be obvious because (1) it was routine in the art to change reaction temperatures and concentrations to optimize a process and (2) the improvement made with the changes was slight, the kind one would expect to obtain with such changes.

Turning now to the present situation, the Smith patent teaches that one can use a six-color ink set to achieve a desirable trade-off of lightfastness and gamut of an image. There is no suggestion, clue, methodology, or indication that would inform the skilled artisan how to increase the color gamut in a four-color ink set. The sum of the argument presented in the Office Action appears to be that, if one can measure the color attributes of inks, then “routine experimentation,” of a kind not specified in the Office Action or described in the reference, would readily provide an “optimum” color gamut. That the art has turned to adding multiple inks to the basic four-color set to obtain a larger color gamut exposes the fallacy of this argument.

Applicants’ ink set was unknown, and could not have been derived using the Smith reference’s six-color ink set or methodology for combining six ink colors to optimize

lightfastness. Applicant's four-color ink set nearly matches the color gamut of the six-color Pantone Hexachrome inks that the industry now uses for printing with a larger color gamut, while offering a huge advantage in reduced equipment costs and reduced printing complexity.

The Office Action alleges that the Smith patent teaches heat set and cold set inks, but these terms are not used. The passage in column 7 merely provides the color characteristics of prints, while the Abstract also says nothing about how the inks set.

The Office Action alleges that the Smith patent teaches using fluorescent material in column 4, lines 5-65, column 6, lines 45-67, and column 8, lines 20-35, but there appears to be no mention of fluorescence, fluorescent colorants, materials, or inks anywhere in these passages or at all in this patent.

Accordingly, Applicants submit that that claims are patentable over the cited reference and request reconsideration and allowance of the claims.

Rejection Under 35 U.S.C. § 103(a) over Smith

Claims 6-13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith (U.S. Pat. No. 6,712,449). This rejection is respectfully traversed.

Claim 6 and its dependent claims 7-13 provide a method of printing that begins with a color separation of the image based on Applicant's four-color ink set and then prints the color image with the four-color ink set according to the color separation.

As already discussed, the Smith patent does not suggest a four-color ink set at all. The Smith reference does not suggest using the particular cyan, magenta, or yellow ink of the claims in an ink set. The Smith patent does not address the problem Applicants faced, of increasing

color gamut of a four-color ink set to approximate the color gamut available with the six-color Hexachrome ink set, but rather concerned balancing lightfastness and color gamut using a six-color ink set. The Smith patent discusses combining low chroma and high chroma inks for improved lightfastness, but does not discuss, suggest, or describe methodology for increasing color gamut, particularly with a four-color ink set.

Moreover, the Smith patent does not describe preparing color separations for a four-color ink set or any ink set.

Regarding claims 7-9, the Smith reference does not mention color profiles, conditions under which they are obtained, or using color profiles.

Regarding claims 11 and 12, the Smith patent does not mention these types of printing.

Regarding claim 13, the Smith reference does not mention the SWOP ink set or compare its gamut with it.

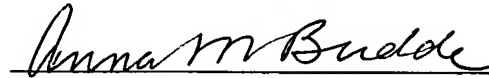
The Smith patent does purport to provide color data for its printed inks using the dodecahedron technique in Table 2a.

Conclusion

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will

expedite prosecution of this application, the Examiner is invited to telephone the undersigned at
(248) 641-1220.

Respectfully submitted,

A handwritten signature in cursive script, reading "Anna M. Budde", written in dark ink.

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